

PATENT ABSTRACTS OF JAPAN

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(71)Applicant : NEC CORP

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(54) AD CONVERTER

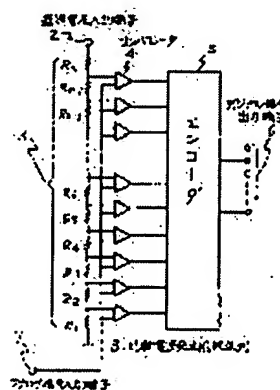
(57)Abstract:

PURPOSE: To execute simultaneously a gamma correction and an A/D conversion, to save other correcting circuit, to simplify a circuit and to decrease a cost by making the resistance value of a resistance train for generating a comparing voltage of an A/D converter internal part into a special value.

CONSTITUTION: When a signal from an analog signal input terminal 7 and respective signals to divide the voltage from a reference voltage input terminal 2 with a resistance train 3 for generating the comparing voltage are compared with a comparator 4, the gamma correction is executed to a voltage divide ratio. At this time, the value of respective resistances R1~Rn of the resistance train 3 is the value shown by equation 1 under the prerequisite to execute the A/D converting of an N bit while the output level is proportional to the γ -th power of an input level. Thus, when a video signal from an image sensor is A/D-converted, an analog or digital circuit for external correction is made unnecessary, simple in circuit and can be made inexpensive in cost.

$$R_i = (1/2^{\gamma})^{\frac{1}{\gamma}} R_{i-1}$$

(ただし、 $R_0 = 0$ 、 $i = 1, 2, 3, \dots, 2^N$ 、 N は出力ビット数、 γ はガンマ係数、 R_i は第*i*段抵抗の全直列抵抗値である。)



LEGAL STATUS

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